



# European Team- Based Learning (TBL) Symposium 2022



NATIONAL FORUM  
FOR THE ENHANCEMENT OF TEACHING  
AND LEARNING IN HIGHER EDUCATION



Team-Based  
Learning™  
Collaborative







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# 1. Welcome from ETBLC Chair



"I have recently taken up the position of chair of the ETBLC and it is my pleasure to welcome you all to the inaugural European Team-Based Learning symposium.

I am delighted that we have been able to partner up with the Technological University of the Shannon (TUS; where I am a lecturer) along with the National Forum for the Enhancement of Teaching and Learning in Higher Education. As you will see we are also showcasing the work of the Erasmus TALENT project with whom we have worked closely for the last two years.

We made the decision to host this symposium as a live in-person event. We did not come to this decision easily as you can imagine. However, I am delighted with the response we have had, and I think you will agree that this has resulted in a wide variety of impressive and interesting presentations. I look forward to the resulting discussions and to the new networks and friendships that will come from today's symposium.

I would like to thank the organising committee in Athlone, Dave O'Hanlon and Ruth Benson. I would also like to thank the ETBLC committee members for their help and for all the non-scheduled meetings. Also, a big thank you to the abstract review committee; Simon Tweddell, Dave O'Hanlon, Steve Crayzer, Graeme Jones, Marina Di Carro, Uwe Richter, Gemma Quinn.

I hope you have an enjoyable and informative symposium."

**Anne Marie O'Brien (Chair ETBLC)**



## 2. Partners and Sponsors

### **Technological University of The Shannon**

With over 14,000 students on six campuses in Ireland's Midwest and Midlands, TUS is one of Ireland's newest Technological Universities. Through applied learning and fresh thinking, our focus is on meeting the evolving needs of society and industry, within our region and beyond.

TUS is a multi-campus university spread across six colleges throughout Ireland's Midwest and Midlands region. With principal campuses at Limerick and Athlone, we benefit from an already strong and vibrant history of education and learning in the wider region, and look forward to playing our part in sustaining and enhancing this identity for generations to come.

By providing a healthy supply of high-quality graduates and an additional focal point for growth and innovation, we can help regional development take a big step forward. And for our nation, a Technological University in the heart of Ireland adds a new dimension to education in our country, demonstrating a commitment to shared values like inclusivity, accessibility, and supportiveness.

Our continuous focus on partnership, innovation and staying agile shows we understand the importance of working with key stakeholders across industry and society. And with more than 14,000 students enrolling in hundreds of courses every year across four counties, our story has only just begun.

### **TBL TALENT Project**

The Erasmus-funded TALENT project draws on the expertise and experiences of a number of TBL educators across Europe to transfer this knowledge and expertise to a number of European secondary schools. The project team are developing resources to train teachers to use TBL as an active and collaborative pedagogy in a number of schools in Europe, and evaluating its impact.

The project is led by the University of Bradford (UK) and supported by TUS (Ireland), the International Baccalaureate Organisation (based in the Netherlands) and Fundacion Educacion Catolica (Spain).

Over the course of the project up to 32 secondary school teachers will be trained in the approach, and will develop and pilot TBL curricula resources in a range of subject areas including Product Design, Biology, Physics, Accounting, Business, Spanish, English, Physical Education, Maths, History, Languages, Communication, and First Aid.

The project team are developing Open Educational Resources for secondary school teachers who wish to learn more about TBL and use it in their teaching. These will be made available at the conclusion of the project in late 2022.

For further information see: <https://www.bradford.ac.uk/pharmacy-medical-sciences/research-innovation/eird/talent/>.

### **European Team Based Learning Community (ETBLC)**

The aim of the ETBLC is to disseminate Team-Based Learning to educators and educational institutions across Europe. We seek to create a continental TBL network made up of local communities of practice, and provide resources and development opportunities to every TBL practitioner who engages with the ETBLC.

The ETBLC aim to achieve this vision by:

- Organising regional meetings such as masterclasses, symposia and conferences to share TBL best practice, coordinate networks and communities of practice, and develop opportunities for collaboration and research.
- Promoting TBL at regional educational conferences to disseminate TBL to new audiences.
- Developing resources to be hosted on a separate members-only European webpage of the TBLC webpages and in multiple European languages, and to which all TBLC member have access to.

Recent ETBLC member accomplishments

- TBL workshops delivered across many European countries
- Peer-reviewed publications
- Awarded Large Erasmus TALENT grant
- Received numerous prizes and accolades
- Establishment of active Communities of Practice across many European countries

If you'd like to contact the ETBLC with a question, suggestion, or to help out, please send an email to [etbhc@teambasedlearning.org](mailto:etbhc@teambasedlearning.org)!

### **National Forum for the Enhancement of Teaching and Learning in Higher Education -**

The National Forum for the Enhancement of Teaching and Learning in Higher Education is the national body responsible for leading and advising on the enhancement of teaching and learning in Irish higher education. We work with those who teach, learn and shape policy and practice to ensure a valued and informed teaching and learning culture in Irish higher education. We focus on the professional development of all those who teach, teaching and learning in a digital world, teaching and learning within and across disciplines, and student success. For more information, please visit us at [www.teachingandlearning.ie](http://www.teachingandlearning.ie) or follow us @ForumTL.

## 3. TBL at TUS, The Story so Far

TUS was one of the first third level institutes in Ireland to adopt the Team Based Learning approach within its programmes.

### 2017-2018



At the end of the 2016/2017 academic year, the Dept of Learning and Teaching invited an experienced TBL practitioner from the University of South Australia, Peter Balan, to facilitate staff workshops on the approach. Over the course of a week, TBL was introduced to lecturers from various faculties, as well as students of the Postgraduate Diploma in Learning and Teaching.

Four lecturers from the Faculty of Business and Hospitality, decided to trial the approach in their classes in the academic year 2017/2018 and were supported by the Department of Learning and Teaching throughout. A community of practice was established and the staff met once a month to support each other during the implementation. Staff and student experiences of the approach were researched (with generally positive results) and the group disseminated their findings internally as well as at national and international conferences.

### 2019-2020



With support from the National Forum for the Enhancement of Teaching and Learning, a national seminar on TBL was held again in 2019, this time facilitated by Simon Tweddle (University of Bradford) and Beck McCarter (currently Nottingham Trent University). That year a workshop series was also delivered in Athlone with a cohort of 16 lecturers from across TUS Midlands completing it.

In 2019, the Dept of Learning and Teaching successfully applied for a Learning Enhancement Initiative specifically for the further development of the Team Based Learning approach (from the National Forum for the Enhancement of Teaching and Learning in Higher Education). This resulted in a number of initiatives. In January, 2020, members of the Faculty of Business and Hospitality and Science and Health visited the University of Bradford to observe how TBL is delivered in the School of Pharmacy (a visit supported by an ERASMUS travel grant).

### 2020-2021 – TBL in a time of COVID

As part of the Learning Enhancement Initiative, a number of resources were developed to help staff and a “TBL 101” workshop was devised and delivered. We also ran a second Fundamentals in TBL Workshop series online. Members of the Dept of Learning and Teaching were also supported to work on becoming TBL consultant trainers.

Whilst introducing TBL, we also had to quickly support staff to pivot their TBL work to the online mode. The necessary IT infrastructure to support online/blended TBL was researched and developed. A research study was carried out to learn more about the student experiences of Online TBL. Our use of LAMS to support online TBL was recognised with a nomination for a Best Use of Educational Technology award at the Irish Education Awards 2022. A number of staff from TUS delivered conference papers on how we did this at the TBLC conference 2021 and Irish Learning Technology Association’s EdTech 2021.

This Learning Enhancement Initiative introduced lecturers from several faculties to the approach with TBL being adopted within further programmes across faculties.

### 2020-2021 – Engagement with Secondary Schools across Europe

We have also helped TBL to be brought into schools within our local community and beyond through our work on the ERASMUS-funded TALENT TBL project. Members of the Dept. of Learning and Teaching sit on the project team, facilitate training, and develop Open Educational Resources for secondary schools. We delivered our first workshop series online in 2021 and in 2022 we have welcomed teachers from Ireland, Spain, the Netherlands and the UK to Athlone.

### 2021-2022

We also have introduced TBL to our European partners in the RUN EU European University. A number of academic developers from across Europe were introduced to the approach at the 2021 Superweek in HAMK University in Finland. In 2021, as part of the National Forum for the Enhancement of Teaching and Learning in Higher Education’s “VITAL” (Valuing Ireland’s Teaching and Learning) month we held sessions for staff from TUS with Simon Tweddle, as well as Marcin Cieslak and Ernie Ghiglione of LAMS International.

TBL has been implemented by staff in TUS within a diverse range of disciplines including management, accounting, communications, business psychology, programming, software engineering, pharmacology, health and safety, research methods, and design. Staff from across faculties have supported each other in their implementations, and community of practice sessions help to develop this support further. Several lecturers from TUS will highlight how they have used TBL in the forthcoming TUS Compendium of Active Learning & Assessment for Student Engagement - Volume 2.

### **Beyond 2022**

The Department of Learning and Teaching is keen to support staff who practice TBL in their teaching.

#### **We assist through:**

- One to One Support: A member of the team can discuss the TBL approach and how it may fit within your module.
- Technical Support: Looking to implement TBL but need the best technologies to support you? We can advise and help you to incorporate tools such as LAMS, Vevox, Moodle and Zoom within your teaching.
- A Community of Practice: A monthly inter-faculty meet-up of TBL educators where practices are shared, and solutions to TBL teaching challenges are discussed.
- TUS TBL Resource Portal: A dedicated Moodle page, which has resources, links, guidance documents, templates, discussion forums and more to get you started.
- Workshops, Seminars, Training Programmes: Introductory TBL Workshops, Drop In sessions and TBL-focussed seminars.

If you are a TUS staff member who wishes to learn more, or would like help to set TBL up in your module, do not hesitate to get in touch. We are also happy to help staff from other schools, institutes, universities and organisations who would like to learn more. Any queries should be directed to Ruth Benson ([ruth.benson@tus.ie](mailto:ruth.benson@tus.ie)) at the Dept of Learning and Teaching.



## 4. Symposium Schedule

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**8.30am-9.00am** –Registration and Tea/Coffee

**9.00-10.00am** - Session 1 - Douglas Hyde Lecture Theatre

**9.00am** – Welcome from Technological University of the Shannon President,  
Prof. Vincent Cunnane

**9.10am** – Keynote Presentation, **Preman Rajalingam**-Director, Centre for Teaching,  
Learning and Pedagogy, Lee Kong Chian School of Medicine, Nanyang Technological  
University

**10.00am – 11.00am - Session 2a-** Douglas Hyde Lecture Theatre

**10.00am** – Research/Practitioner Presentations

- **Team Based Learning in Italian universities: students’ and teachers’ voice** - Antonella Lotti, University of Modena and Reggio Emilia
- **Using TBL to support a group project in a Communication for Engineering module** - Mairead Seery, Technological University of the Shannon
- **Using online collaborative documents as Application Exercises in Family Medicine**  
– Lisa Jackson, Mohamed Bin Rashid University of Medicine and Health Sciences (MBRU) in Dubai / Brunel University School of Medicine UK and Ernie Ghiglione, LAMS International
- **Creating and Delivering Effective Oral Presentations for the SURE2021 conference via Online TBL** – Anne Marie O’Brien, Technological University of the Shannon

**10.00am – 11.00am - Session 2b** – Room B55/56

- **10.00am – Introduction to TBL Workshop** – For delegates new to TBL and who want to know more - Simon Tweddell and Gemma Quinn, University of Bradford

**11.00am – 11.15am – Teas/Coffees** – TUS Canteen, Main Campus

**11.15am to 1.00pm – Session 3** - Douglas Hyde Lecture Theatre

- **11.15am-12.15pm** – Introduction to the TBL TALENT Project. TALENT Project Team, led by Simon Tweddell, University of Bradford and Oscar Urmenita, Fundacion Education Catolica.
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**12.15pm to 1.00pm – Session 4** -Lightning Talk/Practitioner Presentations

- **TBL in conjunction with other pedagogies. Training for collective work in preparation for Project Based Learning** – Silvia La Ferrara, Liceo artistico statale G. Chierici Reggio Emilia
- **The TBL Pivot –from face to face to online and now a hybrid model** - Stephanie Duffy, Technological University of the Shannon
- **TBL in Pharmacology - The power of the Readiness Assurance Process (RAP)** - Natasha McCormack, Technological University of the Shannon
- **Getting on Board with Application Exercises for Team Based Learning (TBL)** – David O Hanlon, Gary Stack, Technological University of the Shannon and Gavin Henrick, Brickfield Education Labs

**2.00pm to 3.45pm – Session 5** - Douglas Hyde Lecture Theatre

- **Team-Based Learning in an Ever-Changing Educational Ecosystem** - Natalie Capel, Keele University, Cosma Gottardi, University of Birmingham, Laura Hancock University of Glasgow, Chloe Howe, Graeme Jones, Tess Phillips, Daniela Plana Keele University
- **A digital tool for self-evaluation of a TBL session** – Jolanda Mol, Leiden University Medical Center
- **Enhancing student nurses’ engagement and learning of applied pathophysiology with TBL** – Ryan Muldoon and Jonathan Branney, Bournemouth University
- **Gathering student feedback in TBL module** – assessment for teaching –Mairead Seery, Technological University of the Shannon
  
- **TBL and Hybrid – a match made in heaven, or a chimera?** –Steve Cayzer, University of Bath
- **Using Very short answer questions (VSAQs) instead of single based answers questions (MCQs) for the Readiness Assurance Process** - Preman Rajalingam, Nanyang Technological University
- **The Case for Team Based Learning in Scriptwriting in Higher Education: a narrative Literature review**–Dee Hughes, Bournemouth University
- **Cultural and Mindset Shifting: from PBL to TBL at Manchester University** - Paul Shore, University of Manchester
- **Promoting and consolidating TBL: the role of Communities of Practice** - Elsa Costa e Silva, University of Minho

**3.45pm-4.00pm – Final Remarks and Close**

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# 5. Abstracts

Abstracts are presented in alphabetical order based on surname of first author.

## Team-Based Learning in an Ever-Changing Educational Ecosystem

**Natalie Capel**, Keele University, **Cosma Gottardi**, University of Birmingham, **Laura Hancock** University of Glasgow, **Chloe Howe**, **Graeme Jones**, **Tess Phillips**, **Daniela Plana** Keele University

### 10 Minute Presentation

The world of education is in a constant flux of change, through pressures such as variable student numbers, changing levels of teaching resources, management's educational philosophy, as well as external factors such as the pandemic. In addition, it is rare to design a course or module from scratch, most people who encounter TBL will be looking to see how this active learning technique can be integrated into existing teaching and courses.

In this presentation we will highlight four ways in which we have adapted our practice so that our teaching could incorporate as many elements of the TBL pedagogy as possible. The first pioneers of TBL at Keele were keen for it to be taken up by a wider group of teachers, so we adapted the 4S scenario in the Application Activities to align with existing workshop style questions and encouraged the adoption of stable teams and RAP element of TBL. Our second challenge was how we adapted TBL to teach cohorts of non-native English speakers in China to prepare them for encountering TBL at Keele. Later, with the onset of the pandemic, we quickly adapted to produce an electronic scratchcard so that tRATs could be delivered online. This Immediate Feedback Electronic Scratchcard is now freely available to staff in all academic settings. Finally, with the return of face-to-face teaching, but in restricted circumstances, we have had to adapt TBL to be delivered in tiered lecture theatres with a constantly changing audience.

Some of our changes may be considered heresy to pure TBL practitioners but we believe these adaptations to be a pragmatic response to the situations we have found ourselves teaching in over the past 8 years.

## TBL and Hybrid – a match made in heaven, or a chimera?

**Steve Cayzer**, University of Bath

### Lightning Talk

In this (hybrid!) practitioner talk we will outline various models of hybrid TBL that we have tried, and outline the advantages and challenges of each. We welcome discussion and contributions from conference participants, many of whom will have their own experiences to share. We are particularly interested in collaboration and engagement with participants who might like to explore some of these models.

## Promoting and consolidating TBL: the role of Communities of Practice

**Elsa Costa e Silva**, University of Minho

### 10 Minute Presentation

This communication presents the experience of a Team Based Learning (TBL) Community of Practice (CoP), in the University of Minho (Portugal), as a key-element in consolidating TBL as a teaching methodology and enhancing its dissemination through teachers' training. CoPs are informal groups of teachers with common pedagogical interests, who come together to share experiences, discuss and improve a particular practice. The University of Minho TBL CoP was created in 2019, gathering more than 20 teachers, across several departments, who shared interest in developing proficiency and implementing TBL in their courses. Usually, the members of this community meet once a month to share experiences, to discuss appropriate adjustments to specific scientific disciplines or contents, and to collaborate on developing resources and instruments to evaluate the impact of TBL on students and teachers. In the context of the CoP, topics such as Individual Readiness Assignments design, peer assessment, digital enhancement have been discussed, contributing to better TBL experiences for teachers and students. The CoP was also instrumental in promoting the pandemic driven adaptation of TBL to the online environment. Another key role of this CoP has been the dissemination of TBL to a wider number of teachers from different higher education institutions. The TBL CoP has run internal and externally supported workshops related to TBL, reaching over 250 higher education professionals from different Portuguese universities. Furthermore, the CoP has also been essential to stimulate participants to engage in collaborative research about their practice. For instance, a small group of teachers within this community of practice, from different scientific areas, developed a study contextualized in the COVID-19 pandemic, comparing student perceptions of TBL delivered online and onsite. In order to assess its effectiveness, students' perception was evaluated, comparing regular versus online TBL classes. The results of this research have been published in an international education journal (Silva et al., 2021). This case shows how important CoPs can be when implementing TBL, through the generation of permanent opportunities for debate and peer learning. The dissemination of TBL and its consolidation in the University of Minho greatly benefited from having a network that supported teachers throughout the process.

## Online national Community of Practice on TBL: the Italian experience

**Marina Di Carro**, University of Genoa, and **Antonella Lotti**, University of Modena and Reggio Emilia

### Poster

“Communities of Practice (CoP) are groups of people who share a concern, set of problems or a passion for a topic and who deepen their knowledge and skills in this area by interacting on an ongoing basis. They do not necessarily work together every day, but meet because they find value in their interactions. While spending time together, they usually share information and advice. They help each other solve problems. They discuss their situations, aspirations and needs. They reflect on common problems, explore ideas and act as a sounding board. Over time, they develop a unique perspective on their topic, as well as a body of common knowledge, practices and approaches. They also develop personal relationships and established ways of interacting. They may even develop a common sense of identity. They become a community of practice.” (Wenger, 1998)

In the literature on Faculty Development there are many references to CoP: Steinert places them among the informal training approaches taking place in groups and reports some studies on CoPs for medical teacher training (Steinert, 2014). In the last few years, Team-based learning has been employed in various Italian Universities (Genoa, Siena, Modena and Reggio Emilia, Verona) in different areas. During the pandemic period, the need for creating a group for sharing tips and best practices and providing support for each other has led to the creation of an online CoP. The choice to operate in a virtual environment allowed the group of teachers to expand their reach beyond a particular workplace or geographical location. The starting team included the two authors, expert TBL practitioners, as CoP facilitators (Wenger, 2002) and a small group of TBL users. With time, a growing number of other university faculty members joined the group after having attended a workshop about TBL, with the desire of deepen their knowledge and implement this methodology in their courses.

The monthly meetings on Microsoft Teams last 90 minutes and focus on a different topic of the TBL sequence each time. Italian online CoP seems to be a promising method to disseminate TBL and act as Faculty Development approach.

## The TBL Pivot –from face to face to online and now a hybrid model

**Stephanie Duffy**, Technological University of the Shannon

### 10 Minute Presentation

The in-person Team Based Learning (TBL) classroom can be a hive of energy, discussion, concentration and active student engagement as students work alone and in small diverse teams to demonstrate their learning of concepts studied in advance of attending the class and apply that learning to real world scenarios. Quickly replicating that experience in the online learning environment that was forced on all learners and educators in early 2019, was initially perceived by this TBL practitioner as a major challenge, and consideration was given to abandon TBL until ‘things get back to normal’.

However, a hesitant move forward to experiment with ‘TBL online’ was undertaken, and thankfully the TBL framework proved to be a robust structure that adapted well to the demands of a fully online learning environment, supported by technologies like Zoom and LAMS. Some adaptations to the style of RAT questions used and the time available to answer them were made to make it less likely for students to ‘look up’ the answers. Zoom breakout rooms worked well to support the tRat process and the Application Exercise discussions, and the LAMS platform proved to be an excellent enabler of the entire process.

When the time came to return to the physical classroom and we were looking forward to ‘going back to normal TBL’, the realities of students having to self-isolate proved to be disruptive, and many teams were missing team members for ‘in-person’ classes. Students who felt well enough to participate but could not attend in-person (due to isolation requirements) were eager not to miss out on the classes (most likely due to the assessment marks available) and they requested to join the TBL classes virtually to connect with their teams and participate. A new hybrid model emerged where ‘remote’ team members could join synchronously and participate (through Zoom and LAMS) in all aspects of the TBL process with the rest of their team members who were in the physical classroom together.

Once again, the TBL framework proved to be adaptable to a hybrid model, supported by the technologies that the students and the instructor had become familiar with and confident in using. The hybrid approach is not without its challenges, most notably the difficulty in bringing the remote participants into the plenary application exercise discussions, and experimentation is ongoing to find an optimal approach.

## **Reflections on group project work through the lens of institutional practice, pedagogical approaches and student experience**

**Siobhan Enright**, TU Dublin

### **Poster Presentation**

Group work and group assessment learning and teaching strategies are not new to the higher education landscape. However as Bigg and Tang (2007) note, assessment there of is a more recent strategy. This they argue is in part to reduce the assessment load and also with the aim of aligning skills to graduate attributes relating to teamwork. Group projects are not however always popular with students, acquiring a reputation for being difficult, creating stress and input that isn't at times reflected in the marks awarded. As such group assessment has become an area of considerable research and debate. This paper reflects on the group project module as part of the BA in Creative Digital Media through the lens of institution, pedagogy and student experience. Over the course of a number of years a group project model is emerging, through continual reflection, evaluation and adaptation which is proving to engage learners and benefit their learning at programme level. This paper considers institutional and departmental practices, their impact, and the need at times to challenge and question institutional practices that do not facilitate or support teaching and learning in group project environments. Not only is it important that the purpose of group work is both appropriate and relevant to the discipline. It is also necessary to consider the level of resources provided to instructors as well as impact that physical resources can have on delivery and student engagement in enhancing their educational experience. In addition to this the paper reflects on the range of pedagogical approaches and technological tools that have proven beneficial in the module development considering specifically the student experience. Through an active engagement with students experience a group project practice is emerging that is both relevant to the discipline and rewarding to the students and staff involved.

## **The Case for Team Based Learning in Scriptwriting in Higher Education: a Narrative Literature review**

**Dee Hughes**, University of Bournemouth

### **10 Minute Presentation**

Team Based Learning (TBL) is a collaborative learning method that has been successfully adopted across a number of disciplines since its inception in the early 1970's. This paper provides an exploration as to how it has been implemented and why it has not been adopted by arts-based disciplines on quite the same scale as those of scientific, medical, engineering and business. The findings indicate that the time required to design a TBL course is a major hindrance to adoption. Other factors such as students' reluctance to engage with the unfamiliar, unsuitable working spaces, the lack of guidance as to how to design the integral problem-solving exercises; an institutional culture not open to adopting new working practises and limited empirical evidence of the impact of TBL in arts and creative disciplines such as scriptwriting, are all reasons given as to why TBL has not crossed wholesale into the study of arts-based subjects. Further research is required to explore those identifiable reasons in more depth with a view to implementing TBL into a scriptwriting course.

## Using online collaborative documents as Application Exercises in Family Medicine

**Lisa Jackson**, Mohamed Bin Rashid University of Medicine and Health Sciences (MBRU) in Dubai / Brunel University School of Medicine UK and **Ernie Ghiglione**, LAMS International

### 10 Minute Presentation

The Mohamed Bin Rashid University of Medicine and Health Sciences (MBRU) in Dubai, United Arab Emirates, has been using Team Based Learning for teaching Family Medicine in its MBBS programme since 2019. Fourth year students at the beginning of their first clinical clerkships attend weekly 4 hour teaching time slots facilitated by Family Physicians working locally in Dubai. Team Based Learning supports Family Medicine by promoting teamwork and was chosen principally for the way it enables the students to look at complex application cases which may be similar to what they encounter in real clinics.

At the beginning of the programme in 2019, these application cases were done using group discussion and flipcharts. However, even with small groups, simultaneous reporting was not simple to achieve and having only one student writing things down sometimes left some students feeling disengaged.

During the COVID pandemic, TBL session had to be delivered online. Therefore, we resorted to use online collaborative documents to deliver the family medicine cases as application exercises.

Each team has its own online collaborative documents (doKus), which allow all the students within their team to contribute to a joint document simultaneously. As one student types in the document all their peers can simultaneously view text being typed on their screens. Unlike with flipcharts where only one student gets to type of behalf of the teams, these doKus allows students to all join and edit the document at the same time. The facilitator can observe how each document (one per team) is being written live and how students share their ideas and collaborate in creating their application exercise response.

When it comes to the simultaneous disclosure of answers, facilitators used the Gallery walk function where students can then see the doKus created by other teams, review their answers, provide feedback and rate their work. In our Family Medicine cases, we encourage students to incorporate communication skills via role scenarios. This represents much more realistically true clinical practice in Family Medicine, where there may be significant uncertainties and the need to consider the patient perspective on management planning.

The application cases are written using standard 4S methodology, but the questions are still written to be sufficiently focussed to avoid drifting from the learning objectives. Once the students have looked at each others' work in the doKu, each week the facilitators pull together key learning points and potential further learning objectives for

students to think about during the ensuing week in clinical clerkships. The doKu can be preserved for future revision as well.

From this experience, we have seen a good engagement from all participants within their own team but also when assessing and evaluating other teams' work.



## Team Based Learning in Italian universities: students' and teachers' voice

**Antonella Lotti**, University of Modena and Reggio Emilia

### 20 Minute Presentation

"Communities of Practice (CoP) are groups of people who share a concern, set of problems or a passion for a topic and who deepen their knowledge and skills in this area by interacting on an ongoing basis. They do not necessarily work together every day, but meet because they find value in their interactions. While spending time together, they usually share information and advice. They help each other solve problems. They discuss their situations, aspirations and needs. They reflect on common problems, explore ideas and act as a sounding board. Over time, they develop a unique perspective on their topic, as well as a body of common knowledge, practices and approaches. They also develop personal relationships and established ways of interacting. They may even develop a common sense of identity. They become a community of practice." (Wenger, 1998)

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## Using online collaborative documents as Application Exercises in Family Medicine

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At the beginning of the programme in 2019, these application cases were done using group discussion and flipcharts. However, even with small groups, simultaneous reporting was not simple to achieve and having only one student writing things down sometimes left some students feeling disengaged. During the COVID pandemic, TBL session had to be delivered online. Therefore, we resorted to use online collaborative documents to deliver the family medicine cases as application exercises.

Each team has its own online collaborative documents (doKus), which allow all the students within their team to contribute to a joint document simultaneously. As one student types in the document all their peers can simultaneously view text being typed on their screens. Unlike with flipcharts where only one student gets to type of behalf of the teams, these doKus allows students to all join and edit the document at the same time. The facilitator can observe how each document (one per team) is being written live and how students share their ideas and collaborate in creating their application exercise response.

When it comes to the simultaneous disclosure of answers, facilitators used the Gallery walk function where students can then see the doKus created by other teams, review their answers, provide feedback and rate their work. In our Family Medicine cases, we encourage students to incorporate communication skills via role scenarios. This represents much more realistically true clinical practice in Family Medicine, where there may be significant uncertainties and the need to consider the patient perspective on management planning.

The application cases are written using standard 4S methodology, but the questions are still written to be sufficiently focussed to avoid drifting from the learning objectives. Once the students have looked at each others' work in the doKu, each week the facilitators pull together key learning points and potential further learning objectives for students to think about during the ensuing week in clinical clerkships. The doKu can be preserved for future revision as well.

From this experience, we have seen a good engagement from all participants within their own team but also when assessing and evaluating other teams' work.

## Team-Based Learning in an Ever-Changing Educational Ecosystem

**Presenting Author: Graeme Jones**

**Natalie Capel**, Keele University, **Cosma Gottardi**, University of Birmingham, **Laura Hancock** University of Glasgow, **Chloe Howe**, **Graeme Jones**, **Tess Phillips**, **Daniela Plana** Keele University

### 10 Minute Presentation

The world of education is in a constant flux of change, through pressures such as variable student numbers, changing levels of teaching resources, management's educational philosophy, as well as external factors such as the pandemic. In addition, it is rare to design a course or module from scratch, most people who encounter TBL will be looking to see how this active learning technique can be integrated into existing teaching and courses.

In this presentation we will highlight four ways in which we have adapted our practice so that our teaching could incorporate as many elements of the TBL pedagogy as possible. The first pioneers of TBL at Keele were keen for it to be taken up by a wider group of teachers, so we adapted the 4S scenario in the Application Activities to align with existing workshop style questions and encouraged the adoption of stable teams and RAP element of TBL. Our second challenge was how we adapted TBL to teach cohorts of non-native English speakers in China to prepare them for encountering TBL at Keele. Later, with the onset of the pandemic, we quickly adapted to produce an electronic scratchcard so that tRATs could be delivered online. This Immediate Feedback Electronic Scratchcard is now freely available to staff in all academic settings. Finally, with the return of face-to-face teaching, but in restricted circumstances, we have had to adapt TBL to be delivered in tiered lecture theatres with a constantly changing audience.

Some of our changes may be considered heresy to pure TBL practitioners but we believe these adaptations to be a pragmatic response to the situations we have found ourselves teaching in over the past 8 years.

## TBL in conjunction with other pedagogies. Training for collective work in preparation for Project Based Learning

**Silvia La Ferrara**, Liceo artistico statale G. Chierici  
Reggio Emilia

### 10 Minute Presentation

Four years ago in Liceo artistico (High School of arts) "G. Chierici" of Reggio Emilia we launched a didactic experimentation in the initial courses (14-16 years old). A team of teachers, specifically trained, offers the class twice a year using a Project Based Learning path. The teachers also experiment with other strategies such as Flipped Classroom, Team Based Learning and Digital Storytelling. The assessment is generally formative as well as summative and makes use of rubrics and checklists. TBL has been introduced in a systematic way for a year in Italian literature, Geo-History and Mathematics. It helps team building and preparation for Project Based Learning, a method that students experience every year through two transdisciplinary paths.

The TBL session include the standard steps: i-RAT, t-RAT, Appeal form, Short lesson by the teacher, Team-Application, Presentation and discussion of Team-Application, Self & peer review.

The assessment consists of the results of all the steps according to the percentages:  
25% iRAT , 35% tRAT (+ appeal's points), 35% Problem 5% Peer review

The group formation is directed by the team of teachers, according to: profit levels, educational needs, team experiences, gender, quality of interpersonal relationships. The groups remain the same in all disciplines for about 3 months.



## TBL in Pharmacology - The power of the Readiness Assurance Process (RAP)

**Natasha McCormack**, Technological University of the Shannon

### Lightning Talk

Team-based learning (TBL) represents a new and innovative pedagogical strategy and is commonly used in the medical field. It has been suggested to result in better learning outcomes than traditional "lecture style" teaching strategies. The outcome of teaching 'Introduction to Pharmacology' using a TBL approach with year 1 pharmacology students at TUS has provided evidence of the effectiveness of TBL. The readiness assurance process (RAP) is a core feature of TBL. Performance of learners is assessed using an individual readiness assurance test (iRAT) and team readiness assurance test (tRAT). The iRAT requires each participant to answer multiple-choice questions (MCQs), over a specified period. This allows each member of the team to demonstrate their individual understanding of the pre-assigned content. Following this, participants work collaboratively to answer the same set of MCQs, again over a specified period. Teams undertake the tRAT as an Immediate Feedback Assessment Technique (IF-AT). Participants are given numerous chances to obtain the correct answer. The individual answers for each option are also shown, which further promotes open discussion among teams. Furthermore, students are required to finish the iRAT before taking the tRAT and prior to receiving their iRAT score.

TBL participants performed better in their tRATs than in their own individual learning achievements in terms of RAT scores. The percentage difference observed was more pronounced in certain cases for example when covering complex topics such as pharmacodynamics and mechanisms of drug action. Interestingly, tRAT scores remained similar to other lessons, highlighting the benefits of teamwork and group discussion in individual student learning.

The outcome of teaching pharmacology using a TBL approach with year 1 pharmacology students has been hugely successful. It has enhanced both student satisfaction and performance compared with groups engaging with traditional lecture style teaching. It is evident that TBL participants performed better after group discussions than their own individual learning achievements in terms of RAT scores. It is a beneficial tool for an educator to use to identify students who may struggle with certain aspects of the course content. Areas of confusion and concepts of pharmacology that learners may struggle to grasp can be determined. Compared with traditional lectures, it is evident that TBL and the RAP promote self-directed learning. Increased student engagement in class was observed compared to modules delivered through the traditional methods. Interpersonal interaction and peer discussion was also observed through collaboration and teamwork.



## A digital tool for self-evaluation of a TBL session

**Jolanda Mol**, Leiden University Medical Center

### 10 Minute Presentation

TBL is not complicated. Once you have understood the method and delivered the first TBL course, you will see the effort needed and the added value. After your first TBL course you will understand more of the theory behind the method and you are able to improve the delivery of your course. But you have to make the first step first. It is really helpful if an institute is supporting the first step. Not only will it help the teacher to deliver the first TBL course, it will also make sure it is delivered in the right way

When the baton is passed to a colleague there is a potential risk that essential TBL elements will be taken away which can result in not achieving the expected output. An accessible guideline, in the form of a Checklist, will prevent the delivery of incomplete TBL courses.

At the LUMC we introduced a TBL course for teachers consisting of five elements:

- Basic TBL: teachers are experiencing a TBL course by doing
- Essential TBL: teachers learn why TBL is working and why all elements are necessary
- Making questions: teachers learn how to make useful RAT and APP questions
- Facilitating: teachers learn how to deliver the TBL course and facilitate the learning.
- Develop: Teachers deliver a TBL course by using given feedback

After the first training (Basic TBL), we offer a working session and discuss how they can implement TBL in their course. We offer the teachers a Dutch knowledge base. This is an extensive base with theoretical background and with handsome formats to use setting up a course. Most frequently asked questions are included. The most important information comes together in a TBL Checklist. It outlines step-by-step what you have to do for preparation, during the delivery of the TBL course and after the delivery. It's a guideline for teachers delivering their first TBL course and navigates you to all the FAQ in the knowledge base.

The TBL checklist helps starting TBL teachers oversee the comprehensive TBL method and makes it easy for them to make a transfer to the TBL teaching method. It also helps to protect the TBL method and make sure the TBL is delivered with all the essential elements. Make use of a TBL checklist (such as this) will help teachers implementing TBL is the most effective format.

## Enhancing student nurses' engagement and learning of applied pathophysiology with TBL

**Ryan Muldoon and Jonathan Branney**,  
Bournemouth University

### 10 Minute Presentation

Student nurses can find the biosciences that underpin effective nursing care difficult to learn. To promote learning and classroom engagement a 6-week applied pathophysiology unit (module) was transitioned from traditional teaching (with some flipped classroom) to entirely Team-based Learning (TBL).

The applied pathophysiology unit was transitioned to TBL by a team of nine nurse academics, one of whom was a certified TBL Consultant-Trainer. Three of the team had never used TBL before while the other six had some experience delivering a short TBL seminar. The TBL version of the unit was delivered to all year 2 BSc (Hons) student nurses (n=289) in academic year 21-22. Student evaluation data, virtual learning environment (VLE) analytics, and exam performance were compared with that of students (n=265) who studied the predecessor applied pathophysiology unit in academic year 20-21, which was largely traditionally delivered by lectures and semi-structured seminars.

**Student Evaluations:** Both units were evaluated half-way through using the institutional Mid-Unit Student Evaluation (MUSE). Responses for five of the eight 5-item Likert scale questions were greater for the TBL unit evaluation, with 76% – 94% of students 'definitely' or 'mostly' agreeing that they worked hard, could explore concepts in-depth, that staff gave good explanations and made the subject interesting, they could contact staff, understood assessment criteria, and felt part of a learning community. The lowest result for the TBL unit was where only 64% of students indicated they had received helpful feedback, however that represented a 20% increase from the previous year. Where responses favoured the traditional unit, the differences were no more than 5% with the largest difference relating to being able to contact staff when needed (81% for traditionally taught versus 76% for TBL). Two of the staff on the team were new and part-time, therefore less accessible, which might explain this finding at least in part.

**VLE analytics :** For the traditional unit students spent on average 51 hours 31 minutes engaging with online learning materials compared to 77 hours 37 minutes with the TBL unit. Students spent on average 7 hours 42 minutes engaged with the eleven iRATs to which they were given unlimited access after class.

**Exam performance :** The mean (SD) exam score for the exam after the TBL unit was 68% (14) versus 56% (16), and the fail rate was 1% versus 17%, compared to the traditionally taught applied pathophysiology unit. Students more highly evaluated the TBL version of the applied pathophysiology unit, had greater engagement with online learning materials outside of class, and demonstrated improved exam performance compared to the predecessor traditionally

## Creating and Delivering Effective oral Presentations for the SURE2021 conference via Online TBL

**Anne Marie O'Brien**, Technological University of the Shannon

### Lightning Talk

This paper presents the experience of staff and students who developed and delivered an oral presentation workshop via online TBL. This paper examines the learning curve and collaboration between a multidisciplinary group of lecturers from 3 different Institutes that came together to develop and deliver a workshop to a group of recent undergraduates. The participants (recent undergraduates) were from varied STEM disciplines and represented 9 Higher education institutes across Ireland.

The participants had submitted an abstract and were accepted to present the results of their undergraduate research at the SURE network conference 2021. This conference takes place simultaneously in three Higher education institutes each year. This has been hosted online for the past two years. In previous years participants would be offered face to face or online tutorials at each host conference institute to help prepare them to present at the conference. This worked well, however it was felt that the process could be streamlined to one session open to all participants regardless of what institute they were from or which venue they would present at.

A team of six lecturers from different institutes and with the help of LAMS international devised an oral presentation workshop that could be delivered online or face to face. In advance of the session, pre-reading material was collated and curated, and made available to participants via a specially designed sway. MCQ and application tasks were carefully and specifically devised for the target participants. Participants pre-registered for the workshop via a link supplied by Lams international and the workshop platform used was zoom. We hoped that participants would come to the session and that we would provide a unique multidisciplinary workshop where they shared and learned from each other. This was a new experience for the lecturers and the participants as only one of the lecturers had previous experience of using or devising lesson's via TBL. Then there was the added learning from using LAMs to deliver the session.

The workshop exceeded our expectations, 14 out of 25 presenters came to the workshop and an interesting observation is that 5 out of the 6 "winners" on the day of the conference had attended the workshop. Students said they found the workshop "engaging, fun, informative, helpful, creative, efficient and excellent" some of the things they felt really worked well were the discussion questions and engaging with other presenters. This paper will reflect on this experience from the lecturer's point of view and from the participants. We will explore what worked well and what needs to be improved. We also look at how this has impacted the lecturers who prepared this and if they then went on to use TBL in their own teaching.

## Getting on Board with Application Exercises for Team Based Learning (TBL)

**David O Hanlon, Gary Stack**, Technological University of the Shannon, and **Gavin Henrick**, Brickfield Education Labs

### Lightning Talk

Simultaneous reporting of application exercise outputs can be challenging within online, synchronous TBL. Online conferencing tools offer functions such as chat and shared whiteboards but can compromise simultaneity and user experience. The design of the application task may also need to be adapted in order to meet the constraints of these functions. Specialised TBL software can remedy these issues but can incur significant costs (e.g. licenses, set up, training time).

Board is a new Moodle activity that was developed by Brickfield Education Labs with Dublin City University, TUS Midlands, and University College London with support from the National Forum for the Enhancement of Teaching and Learning in Higher Education. It allows students to create digital "post-its" on a virtual class "wall". Text, images and videos can be posted. Board offers the functionality of commercial tools like Padlet® but has benefits in terms of accessibility, security, data protection and assessment.

Board was considered as a suitable solution for the facilitation of Application Exercises within an online programme (Higher Diploma in Leadership) at TUS Midlands in 2022. It was trialled with two class cohorts over a number of evenings. Teams could easily post outputs simultaneously. Having team decisions visible for all students made for engaging whole class debate.

Whilst Board was initially used as a means for supporting synchronous online TBL, the benefits for face-to-face delivery are also evident. All team outputs are permanently visible to the class throughout a module. Images can be produced and remain visible to the whole class on the one "wall" thus reducing the need for whiteboards or physical voting cards and stands. Video even becomes an option for team outputs. The "Post-It" board metaphor with "drag and drop" functionality is also potentially more engaging than existing solutions. As the tool is housed within Moodle, it can also align seamlessly with other Moodle functions such as groupings. Board is intuitive to use on both the staff and student side, which may increase uptake from staff who are familiar with Moodle and wish to experiment with TBL without having to learn how to use new software.

## Using Very short answer questions (VSAQs) instead of single based answers questions (MCQs) for the Readiness Assurance Process

**Preman Rajalingam**, Nanyang Technological University

### 10 Minute Presentation

Using Very short answer questions (VSAQs) instead of single based answers questions (MCQs) for the Readiness Assurance Process. In this short presentation, I'll be presenting how we used VSAQs for the Readiness Assurance Process as a viable alternative to simple MCQs or single based answer questions. Very short answer questions (VSAQs) are a novel question format that encourage learners to use more authentic clinical reasoning strategies when compared to MCQs. Therefore our motivation to implement them in the context of TBL.

We present the advantages, the challenges and the results of a research study conducted at Imperial College London that compares the outcomes of using both with large cohorts of students.



## Team Based Learning within a Software Engineering Curriculum

**Michael Russell**, Technological University of the Shannon

### Poster Presentation

follows a defined Software Development Life-Cycle consisting of a series of planned activities. One such life-cycle is called Agile Methodologies, where planning the project is incremental in that (incomplete) versions or increments of the software being developed are made available to the customer for review and feedback purposes. The professional knowledge that is Software Engineering can be classified as either explicit or tacit knowledge. Ryle (1949) defines explicit knowledge as "knowing that" knowledge, which can be definitively articulated and is comprised of 'theories and techniques' (Schön, 1983, p.27) consisting of 'facts, formulae and principles' (Murphy et al., 2008, p.210). On the other hand, Ryle characterises tacit knowledge as "knowing how" to solve real-world concrete problems using the theories and techniques that comprise the explicit knowledge of Software Engineering. Such tacit knowledge refers to a person's ability, disposition, and skill to engage in practice competently, skillfully, and intelligently, both on their own and as part of a Software Engineering team. Through action research I inquired into my pedagogical practice by asking the question: 'How can I, as a lecturer, improve my pedagogical practice to value tacit Software Engineering knowledge?' (Russell, 2021, p.18). Through this inquiry I learned to transform my practice by changing my role within the classroom to being a facilitator who, incorporated teamwork to employ Agile Methodology approaches used within the Software Industry, encouraged and promoted reflection, and emphasised both assessment FOR and AS learning, as I enacted the curriculum on behalf of and with the students I teach. In this paper, I present my findings and reflect on the actions I took to transform my practice. In doing so, I draw on my experiences of practice as well as the students' experiences as they participated within the enacted curriculum.

## Using TBL to support a group project in a Communication for Engineering module

**Mairead Seery**, Technological University of the Shannon

### 10 Minute Presentation

Using TBL to support a group project in a Communication for Engineering module This practitioner / case study presentation will show how TBL was used in a semester 2 Communication module for first year Engineering students. The aim of using TBL was to support students as they prepared their group project. The presentation will give an overview of the content (iRATs and application exercises) of the TBL module. It will outline the benefits of TBL in the context of doing a group project such as group formation, in-class task-oriented student collaboration, scaffolded application exercises leading towards the project deliverables, peer evaluation and more. The presentation will also consider the challenges involved such as group size, and how some requirements of the group project may have had a negative impact on the TBL experience. The paper will conclude with recommendations for adaptations of the TBL approach to optimise the group project experience in the next delivery of the module.



## Gathering student feedback in TBL module – assessment for teaching

**Mairead Seery**, Technological University of the Shannon

### Lightning Talks

Gathering student feedback in TBL – assessment for teaching Using LAMS to for a first-time delivery of a TBL module was a steep learning curve for this educator with regard to teaching method and use of technology. Gathering student feedback in weekly classes over the six-week delivery proved to be invaluable in this context. The feedback could be shared anonymously with students in the same class, the educator could respond to students in the moment and could then use the information to shape the next TBL lesson. Feedback was captured using the survey feature in LAMS, but alternative polling methods (such as Vevox) would work just as well. This presentation will showcase the different questions used over a six-week period and will indicate how these questions worked to assess for teaching. They might be a useful template for novice practitioners and indeed students using TBL or LAMS for the first time.

## Guiding principles on writing MCQs for the TBL environment

**Mairead Seery**, Technological University of the Shannon

### Poster Presentation

Guiding principles on writing MCQs for the TBL environment MCQs are a fundamental element of the TBL approach. Unlike other learning contexts in which MCQs may be used, the role of the MCQ in TBL is to promote learning rather than merely assess. Within a TBL context, MCQs must contain sufficiently complex questions and a choice of plausible distractors to withstand - and even provoke - robust discussion amongst team members. Writing MCQs for a TBL unit is therefore a challenging task. This paper proposes to review literature on writing MCQs with two objectives in mind. Firstly, it seeks to identify best practice for practitioners to write MCQs (such as Butler, 2018) that will engage learners cognitively in a TBL context. A second objective is to consider whether getting students to write their own MCQs (such as Grainger et al., 2018 and Papinczak et al., 2012) might constitute a worthwhile application exercise in the TBL environment. Having concluded the review, the paper will propose guiding principles for writing MCQs for both TBL practitioners and possibly also for TBL students themselves.



## Cultural and Mindset Shifting: from PBL to TBL at Manchester University

**Paul Shore**, University of Manchester

### 20 Minute Presentation

For the past 28 years, Manchester University has taught Medicine via PBL. However, with better technologies and modern approaches to teaching, Manchester is revising its teaching delivery approach and is planning to adopt a form of TBL. With an annual intake of over 500 medical students the challenges are daunting. In this presentation we will discuss some of the cultural and mindset shifting required for these new practices to become the new norm.

# The effects of online team-based learning on undergraduate nursing students performance, attitudes and accountability during COVID-19 pandemic

**Valeria Vannini**, University of Modena and Reggio Emilia

## Poster Presentation

Background: The COVID-19 pandemic affected all educational systems worldwide. Due to social distancing requirements, many institutions decided to move their teaching methods, including Team-Based Learning activities, from face-to-face to an online format. The primary aim of this study is to examine the performance of undergraduate nursing students on TRAT and IRAT during online TBL. The secondary aims of this paper are to evaluate the students' attitudes toward online TBL and their accountability, preferences and satisfaction with this learning methodology. Methods: The study employed a one-group pretest-posttest quasi-experimental design. Sixty first-year undergraduate nursing students attended nine online TBL sessions in the Clinical nursing course during the 2020/21 academic year. The primary outcome of the study was evaluated comparing the average scores obtained by the students in the TRAT versus the IRAT in each online TBL session. The students' attitudes towards TBL, before and after the training intervention, were measured through the anonymous questionnaire designed by Parmelee et al. (2009). Finally, only after the training intervention, students' accountability, preferences and satisfaction were collected through the questionnaire Team Based Learning Student Assessment Instrument (TBL-SAI) (Mennenga, 2012). Results: A statistically significant improvement was identified in students' performance between TRAT and IRAT in all the nine online TBL sessions ( $p < 0.001$ ). Cronbach's alpha for Parmelee et al.'s questionnaire was 0.91. A comparison of overall mean scores for statements in the category "Satisfaction with team experience" showed a statistically significant increase after the online TBL sessions ( $p = 0.003$ ). Participants appreciated the experience of peer review and considered it to be fair ( $p < 0.001$ ), even though they did not consider it as a factor encouraging them to study more ( $p = 0.028$ ). Finally, students felt that being part of a team made them more competent in clinical reasoning and in making the right decisions ( $p < 0.001$ ). Cronbach's alpha for TBL-SAI was 0.76. The mean scores for the accountability ( $m = 30 \pm 3.7$ ) and preferences for TBL ( $m = 51.8 \pm 6.3$ ) were higher than their neutral values ( $n = 24$ ;  $n = 48$ ). Students' satisfaction was neutral ( $m = 27.8 \pm 5$ ,  $n = 27$ ). Conclusions: In online TBL, teamwork has improved the group performance compared to individual results and has been appreciated by the participants. In addition, the online TBL had a positive effect on the accountability of students who preferred it to frontal lectures.



## 6. Author Biographies



**Jonny Branney** is a Principal Academic in Nursing and Clinical Sciences at Bournemouth University. He has been a TBLC certified Consultant-Trainer in Team-based Learning for six years and is proud to have supported colleagues at BU to adopt TBL, notably in the BSc (Hons) and MSc Nursing programmes.



**Steve Cayzer** is a Senior Lecturer at the University of Bath. He has spearheaded the introduction of Team Based Learning (TBL) in the institution, across both postgraduate and undergraduate programmes. Over the pandemic, Steve experimented with a number of methods to make TBL work in the online and hybrid environment. In 2022 he gained a certification in Hyflex Course Design and is currently designing a Masters programme which combines Hyflex and TBL. He was awarded the Innovation in Teaching Award from the University of Bath in 2019, and was made a National Teaching Fellow in 2021.



**Elsa Costa e Silva** is a professor in the Communication Sciences Department of University of Minho (Portugal). She has been coordinating the TBL Community of Practice of University of Minho since 2020 and has been involved in intra and inter-institutional TBL training workshops for higher education teachers.



**Stephanie Duffy** currently lectures in Management, Leadership and Professional Development in the Faculty of Business and Hospitality in the Technological University of the Shannon (TUS). Stephanie has a Masters in Organisational Psychology from University College Dublin and has 20+ years industry experience in a variety of sectors as a consultant, facilitator, trainer, coach and advisor. She is a member of the Psychological Society of Ireland and the International Association of Facilitators.



**Marina Di Carro** is an analytical chemist working at the University of Genoa as an Associate Professor, teaching chromatography and mass spectrometry. Since 2019 she employs TBL in her course with second-year students of the Bachelor's programme "Chemistry and Chemical Technologies" with very positive feedbacks.



**Ernie Ghiglione** is the Managing Director of LAMS Education Asia Pte Ltd, a Singapore based company that manages the development of the Open Source Learning Activity Management System (LAMS) eLearning platform. While in this position, LAMS usage has reached 1.8 million students worldwide. As a Director of the LAMS Foundation, Ernie advocates for open source learning design platforms that to encompass online, blended and hybrid teaching and learning strategies.



**Dee Hughes** is a professional scriptwriter and full-time lecturer in scriptwriting at Bournemouth University. His research is focused on Team Based Learning and its application to the teaching of scriptwriting. In the future he aims to expand his research into the adoption of a variety of teaching methods such as passion driven learning in scriptwriting.



**Graeme Jones:** "I begged my first 8 scratch cards in 2014, made the second set using laminated paper and tippex, received a University Teaching Innovation Award to buy the next and now promote the Instant Feedback Electronic Scratchcard developed at Keele during lockdown. TBL is widely integrated into the Chemistry and other courses at Keele and in 2021 the Keele TBL group won the Royal Society of Chemistry Team Prize for Excellence in Higher Education."



**Silvia La Ferrera** is a high school teacher of Italian literature and geo-history in Reggio Emilia in Liceo Artistico "G. Chierici". She coordinates an experimental course based on learning centred approaches (Project Based Learning, Flipped Classroom, Team Based Learning) and is attending the Digital Education course at Unimore (University of Modena and Reggio Emilia). She's also a member of the School's Libraries Regional Board and editor of travel and anthropological magazine Erodoto108.



**Antonella Lotti** is an Associate Professor in Experimental Pedagogy at the Department of Medicine, University of Modena and Reggio Emilia, Italy. , Antonella has a PhD in Medical Education. Her interests are: Innovative Teaching Methods (including Team Based Learning and Problem Based Learning), and Faculty Development. She is widely published, authoring of over one hundred papers in journals and books.



**Natasha McCormack** completed her PhD in the Institute of Immunology at Maynooth University in 2013. She subsequently worked as a research technical officer at TU Dublin for 5 years. She joined TÚS as an assistant lecturer in 2019 where she lectures on the Pharmacology and Pharmaceutical Science programmes. In 2020 she was involved in the development of a new B.Sc in Pharmacology at TÚS and is the current programme coordinator. She is currently undertaking a Postgraduate Diploma in Teaching and Learning and has research keen interests in Higher Education including virtual laboratories, innovative learning outcome assessments and TBL. Recently, her scientific research interests include natural compounds as novel therapeutics. She has a specific interest in epithelial immunology and is currently supervising a PhD student researching natural compounds for treatment for endometriosis.



**Jolanda Mol** is an Educational Advisor at Leiden University Medical Centre. Jolanda is a cognitive psychologist. She is a TBL ambassador and working hard to make the curriculum more active for medical students through TBL. She is a TBLC Trainer Consultant, TBL advisor for higher education in the Netherlands and chair of a TBL workgroup for medical education (NVMO).



**Ryan Muldoon** is currently a Lecturer-Practitioner at Bournemouth University. I have been a nurse for the last 11 years specialising in Accident and Emergency where I have spent most of my career. Education has been a passion, so moving into higher education was clear move to help with the new generation of nurses.



**Anne Marie O'Brien** is a lecturer in the Technological University of the Shannon (TUS) and has an MSc and PhD in Toxicology and Biochemistry respectively as well as a PgDip in Learning and Teaching. She is currently in the process of obtaining accreditation as a consultant-trainer in Team-Based Learning and she is the current chair of the ETBLC .



**Dave O Hanlon** is a Chartered Work and Organisational Psychologist and Lecturer at the School of Business and Management at TUS (Midlands Campus). He also works in the Dept of Teaching and Learning and has been using TBL in his teaching since 2017. Dave has facilitated TBL workshops for lecturers in TUS and beyond and has presented research on student and staff experiences of TBL at national and international conferences.



**Preman Rajalingam** is Director for the Centre for Teaching, Learning and Pedagogy at the Nanyang Technological University (NTU), Singapore. He is a Senior Lecturer in Medical Education at LKC Medicine, a joint school of NTU and Imperial College London, and an Honorary Reader at Brunel University London.



**Michael Russell** I am a lecturer and pedagogical researcher in Software Engineering at the Technological University of the Shannon: Midlands Midwest. I employ Action Research to inquire into and transform what I do as a teacher. In doing so, I have embraced the concept of cooperative learning as a means to incorporate team-based learning, reflection, and assessment for/as learning within the curriculum as I facilitate and help students to develop their professional knowledge and competence.



**Mairead Seery** (PhD in French) currently teaches modules in Communication and Developing Academic Practice to first year students in TUS Midlands. She is interested in techniques and technologies which develop students' communication skills so that they become more confident. She has published on the use of Voicethread, a web-based application, to enable peer feedback.





**Gary Stack** is a lecturer and researcher in both the Department of Nursing and Healthcare and the Department of Learning and Teaching in the Technological University of the Shannon (TUS). Gary holds an undergraduate degree in pharmacy and a PhD in pharmaceutical chemistry from Trinity College Dublin. He also holds an MBA from Bradford University and a postgraduate diploma in learning, teaching and assessment from TUS. His research interests include pharmaceutical chemistry, drug discovery, pharmacy practice, educational technology and organisational change.



**Valeria Vannini** is a first-year PhD student in Clinical and Experimental Medicine at the University of Modena and Reggio Emilia, Italy. Valeria's ten years of experience working as a nursing educator at the Nursing Degree has given her solid experience in the area of academic education. Before pursuing her Master's Degree in Nursing at the University of Bologna, Valeria worked as an intensive care nurse. Her primary research interests focus on teaching methods in nursing education.





## 7. About Athlone

Welcome to Athlone town which is situated within central Ireland.

The town lies on the River Shannon just south of Lough (lake) Ree. Located at a major east-west crossing of the Shannon, it has always been an important garrison town. This vibrant town is steeped in history and culture- buzzing with chatter and a warm welcome.

Take a walk along the River Shannon through the heart of the charming town with Athlone Castle in the background. Dine at great restaurants and immerse yourself in the history of the area that's been in use since the Bronze Age.

On the edge of Athlone lies Lough Ree, a hub for fishermen, swimmers and anyone who enjoys scenic views, while the monastic site of Clonmacnoise lies just a few minutes' drive away.

The medieval Athlone Castle offers views from its battlements, plus displays on local history. South of town, along the River Shannon, the early Christian ruins of Clonmacnoise include a cathedral and 7 churches. To the north, vast Lough Ree is dotted with islands, some housing monastic ruins.

Athlone area is the perfect base to reconnect, and to discover Ireland's Hidden Heartlands.



